

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re the Application of: INOUE, et al.

Group Art Unit: 2814

Serial No.: 09/473,988

Examiner: DOAN, Theresa T.

Filed: December 29, 1999

P.T.O. Confirmation No.: 1714

For: SEMICONDUCTOR DEVICE AND METHOD OF MANUFACTURING THE SAME

REQUEST FOR RECONSIDERATION AFTER FINAL REJECTION

BOX AF

Commissioner for Patents
P.O. Box 1450
Alexandria, Va 22313-1450

May 8, 2003

Sir:

In response to the Office Action dated January 8, 2003, applicants request favorable reconsideration of the above-identified application. Claims 1-9 and 11-20 are pending.

Claims 1-9 and 20 were rejected under 35 USC §102(e) as being anticipated by Taniguchi et al. This rejection is respectfully traversed.

The Examiner argues that Taniguchi et al. discloses an insulating layer 2 having an H content of not less than 15.4 atom % in the composition. The Examiner relies upon Figures 1 and 2 and the disclosure at column 6, lines 20-24. The portions of Taniguchi et al. highlighted by the Examiner merely refer to Hydrogen Silsesquioxane ($\text{HSiO}_{3/2}$)_n.

Claims 1 and 8 of the present application require "an H content of not less than 15.4 atom %." These claims further require the first insulating layer as having the specified H content of not less than 15.4 atom %.

An H content of ($\text{HSiO}_{3/2}$)_n before curing would have a value of 28.6 atom %. However,



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when $(\text{HSiO}_{3/2})_n$ is used as an material of an insulation film, curing is necessary. The conditions of curing would vary the H content. Taniguchi et al. does not disclose any condition with respect to curing on which the H content would be not less than 15.4 atom %, As such, Taniguchi et al. does not teach the claimed H content of not less than 15.4 atom %.

Claims 2, 7 and 9 require the first insulating layer to have a SiH content of not less than said threshold. The Examiner argues that the claimed limitations with respect to the threshold would be inherent. Applicants respectfully traverse the position of the Examiner.

As discussed in the present specification, a threshold at which the degassing amount will steeply change upon variations in SiH content exists in the relation between the hydrophobic SiH content of an HSQ film and the degassing amount from the HSQ film. In other words, the degassing amount abruptly decreases upon a slight increase in the SiH content at the boundary of this threshold. The threshold depends upon the curing conditions. Since Taniguchi et al. fails to teach or suggest anything with respect to the curing conditions, Taniguchi et al. can not be considered to inherently possess the features required by claims 2, 7 and 9. As such, Taniguchi et al. does not anticipate the claims.

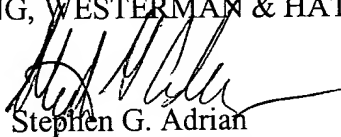
For at least the forgoing reasons, the claimed invention distinguishes over the cited art and defines patentable subject matter. Favorable reconsideration is earnestly solicited.

Should the Examiner deem that any further action by applicants would be desirable to place the application in condition for allowance, the Examiner is encouraged to telephone applicants' undersigned attorney.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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Attachments: Petition for Extension of Time